

TEXT OF REGULATIONS

TITLE 19 PUBLIC SAFETY DIVISION 1. STATE FIRE MARSHAL CHAPTER 3 FIRE EXTINGUISHERS

LEGEND FOR TEXT

Changes are illustrated by underline for additions to language originally proposed, and by ~~strikeout~~ for deletions to language originally proposed.

557.4. "D" Definitions.

- (a) D.O.T. United States Department of Transportation, which has jurisdiction over compressed gas cylinders and cartridges.
- (b) Dry Chemical Closed Recovery System. A system that ~~provides for the transfer of dry chemical agent between extinguishers and recovery containers that~~ is constructed in a manner that prevents the introduction of foreign material into the agent being recovered. It shall also have a means of visually inspecting the recovered agent for contaminants and is closed to prevent the loss of agent to the atmosphere.

NOTE: Authority cited: Section 13160, Health and Safety Code. Reference: Sections 13160, 13162, Health and Safety Code.

557.5. "E" Definitions.

- (a) "E" Number. Fire Extinguisher Concern License Number designated by the Office of the State Fire Marshal.
- (b) "EE" Number. Certification of Registration Number designated by the Office of the State Fire Marshal to individuals qualified to perform specific acts of servicing fire extinguishers.
- (c) Effectiveness. Having the ability to produce the desired extinguishing potential.
- (d) Electronic Monitoring. A method of electronic communication (data transmission) between an in-place fire extinguisher and an electronic monitoring device/system.
- ~~(d)~~ (e) Employee. Those persons who work directly for a licensed concern in the business of servicing portable fire extinguishers for a fee or are employed by and work directly for a public or private company not engaged in the business who service their own portable fire extinguishers
- ~~(e)~~ (f) Empty. To completely remove all contents from a portable fire extinguisher except the expellant cartridge.
- (f) (g) Extinguisher. See Section 557.16(c), Portable Fire Extinguisher.
- (h) Extinguisher Cabinet. An identifiable and readily accessible fire extinguisher housing device designed to store and protect fire extinguishers.

NOTE: Authority cited: Section 13160, Health and Safety Code. Reference: Sections 13160 - 13164, 13170, 13174 – 13177, 13183, 13189, 13190.1 and 13190.3 Health and Safety Code.

557.8. "H" Definitions.

(a) Halogenated Agents. Halogenated (clean) agents referenced in these regulations are of the following types:

(1) Halons. Halons include Bromochlorodifluoromethane (Halon 1211) bromotrifluoromethane (Halon 1301), and mixtures of Halon 1211 and Halon 1301, (Halon 1211/1301).

(2) Halocarbons. Halocarbon agents include hydrochlorofluorocarbon (HCFC), hydrofluorocarbon (HFC), perfluorocarbon (PFC), and fluoriodocarbon (FIC) types of agents.

(b) ~~Halon~~ Halogenated Closed Recovery System. ~~A system that provides for the transfer of halon between extinguishers, supply containers, and recharge and recovery containers in compliance with U.L. Standard 2006.~~ A system that provides for the transfer of halogenated agents between fire extinguishers, supply containers and recharge/recovery containers so that none of the halogenated agent escapes to the atmosphere. The system's supply or recharge and recovery container shall be capable of maintaining the agent in a sealed environment until it is reused or returned to the agent manufacturer. Closed recovery systems for halogenated agents with an ozone depleting potential (ODP) of 0.2 or greater shall be listed for use with that agent.

NOTE: Authority cited: Section ~~13150~~, 13160, Health and Safety Code. Reference cited: Sections ~~13160~~, 13162, Health and Safety Code.

557.13. "M" Definitions.

(a) Maintenance. A thorough examination of the fire extinguisher done in accordance with the manufacturer's written instructions and the requirements of this chapter. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. Maintenance includes a thorough examination and any necessary repair or replacement. Maintenance will normally reveal if hydrostatic testing or internal maintenance is required.

(b) Master Gauge, Low Pressure Test Equipment. A master gauge is a pressure indicating device that is used as a calibration standard and has an inherent accuracy equal to or better than the requirement for the pressure indicating device being verified. Master gauge calibration shall comply with the Section 12500 of the California Business and Profession Code by a third party using a dead weight test device or an electronic pressure measuring device of appropriate accuracy. A master gauge shall not be used as a pressure indicating device.

~~(b)~~ (c) Marketing. The act of selling. (See Section 557.19.(a))

~~(c)~~ (d) Mild Steel Shell. Except for stainless steel and steel used for high pressure cylinders, all other steel shells are defined as "mild steel" shells.

NOTE: Authority cited: Section 13160, Health and Safety Code. Reference: Sections ~~13160~~, 13162, Health and Safety Code.

557.23. "W" Definitions.

(a) Water Mist Fire Extinguisher. A fire extinguisher containing distilled or de-ionized water and employing a nozzle that discharges the agent in a fine spray.

~~(a)~~ (b) Water-Type Fire Extinguisher. A water-type fire extinguisher contains water-based agents, such as water, AFFF, FFFP, antifreeze, and loaded stream.

~~(b)~~ (c) Wet Chemical. Wet chemicals include, but are not limited to, aqueous solutions of potassium acetate, potassium carbonate, potassium citrate, or combinations of these materials.

~~(c)~~ (d) Wheeled Fire Extinguisher. For the purposes of this Chapter, wheeled fire extinguishers are considered portable fire extinguishers as defined in Section 557.16(c).

NOTE: Authority cited: Section 13160, Health and Safety Code. Reference: Sections 13160, 13162, Health and Safety Code.

561.2. Fire Test and Performance Standards.

(a) Portable fire extinguishers used to comply with this regulation shall be listed and labeled and meet or exceed all of the requirements of the fire test standards and one of the appropriate performance standards shown below:

(1) Fire Test Standards:

(A) ANSI/UL 711, Standard for Fire Extinguishers, Rating and Fire Testing 6th Edition, 2002 7th Edition, 2009.

(B) UL Subject 711A, Fire Test Method for Portable Hand-Held Extinguishers Intended For Use on Residential Cooking Equipment July 21, 2005.

(2) Performance Standards:

(A) CO2 Types: ANSI/UL 154, Standard for Carbon Dioxide Fire Extinguishers, 8th Edition, 1995-9th Edition, 2009.

(B) Dry Chemical Types: ANSI/UL 299, Standard for Dry Chemical Fire Extinguishers, 10th Edition, 2002 2009.

(C): UL Subject 299D, Dry Chemical Fire Extinguishers for Residential Cooking, July 9, 2010 as amended

Amended Section as follows:

7.1 An extinguisher complying with the requirements in this Outline shall be marked "Residential Kitchen Fire Extinguisher" "Special Purpose – For Residential Cooking Media Fires" this statement shall appear immediately below the operating instructions on the nameplate in a font size no less than the font used for the operating instructions. In addition to the other markings required by UL 299.

~~(C)~~ (D) Water Types: ANSI/UL 626, Standard for Two and One-Half Gallon Stored-Pressure, Water-Type Water Fire Extinguishers, 7th Edition, 1995-8th Edition, 2007.

~~(D)~~ (E) Halon Types: ANSI/UL 1093, Standard for Halogenated Agent Fire Extinguishers, 5th Edition, 1995.

~~(E)~~ (F) Foam Types: ANSI/UL 8, Standard for ~~Foam~~ Water Based Agent Fire Extinguishers, ~~5th Edition, 1995~~ 6th Edition, 2005.

~~(F)~~ (G) Clean Agent Types: ANSI/UL 2129, Standard for Halocarbon Clean Agent Fire Extinguishers ~~1st Edition, 1999~~ 2nd Edition, 2005.

~~(G)~~ (H) Loaded Stream/ K-Class Types: ANSI/UL 8, Standard for ~~Foam~~ Water Based Agent Fire Extinguisher, ~~5th Edition, 1995~~ 6th Edition, 2005.

(I) Closed Recovery System: UL 2006, Standard for Halon 1211 Recovery/Recharge Equipment, 5th edition 2011

~~(H)~~ (J) Test Weights: ASTM E 617-97, Standard Specification for Laboratory Weights and Precision Mass Standards.

(b) The identification of the listing and labeling organization, the fire test and performance standard which the extinguisher meets or exceeds shall be clearly marked on each extinguisher.

EXCEPTION: Extinguishers manufactured prior to January 1, 1986.

(c) An organization's listing, labeling and marking of extinguishers used to comply with the requirements of this chapter shall utilize a third party certification program for portable fire extinguishers which meets or exceeds ANSI/UL 1803, ~~2nd Edition, 1997~~ 3rd Edition, 2006.

EXCEPTION: Extinguishers manufactured prior to January 1, 1986.

NOTE: Authority cited: Section 13160 and ~~13189~~, Health and Safety Code. Reference: Section 13160, ~~13164, 13165, 13176, 13177, 13178 and 13189~~, and 13162 Health and Safety Code.

567. Distribution of Fire Extinguishers.

(a) The minimum number of fire extinguishers needed to protect a property shall be determined as outlined in this section. Additional extinguishers may be installed to provide more suitable protection.

(b) Fire extinguishers shall be provided for the protection of both the building structure and the occupancy hazards contained therein.

(c) Required building protection shall be provided by fire extinguishers suitable for Class A fires.

(d) Occupancy hazard protection shall be provided by fire extinguishers suitable for such Class A, B, C, D, or K fire potentials as may be present.

(e) Extinguishers provided for building protection may be considered also for the protection of occupancies having a Class A fire potential.

(f) Buildings having an occupancy hazard subject to class B and/or Class C fires shall have a standard complement of Class A fire extinguishers for building protection, plus additional Class B and/or Class C extinguishers. Where fire extinguishers have more than one letter classification (such as 2A:20-B:C), they may be considered to satisfy the requirements of each letter class. When using multi-purpose extinguishers for the protection of Class B hazards, the maximum travel distances described in Table 3 must be observed.

(g) Rooms or areas shall be classified generally as light (low) hazard, ordinary (moderate) hazard or extra (high) hazard. Limited areas of greater or lesser hazards shall be protected as required.

(h) On each floor level, the area protected and the travel distances shall be based on fire extinguishers installed in accordance with Tables 2 and 3.

(i) Fire extinguishers shall not be obstructed or obscured from view.

EXCEPTION: In large rooms, and in certain locations where visual obstruction cannot be completely avoided, means shall be provided to indicate the fire extinguisher's location.

(j) Fire extinguishers shall be conspicuously located along normal paths of travel where they will be readily accessible and immediately available in the event of a fire.

(k) Portable fire extinguishers containing halogenated agents shall conform to confined space volume requirement warnings contained on the fire extinguisher nameplates.

(l) Wheeled fire extinguishers shall be used for hazard protection in areas in which a fire risk assessment has shown the following:

(1) High hazard areas are present.

(2) Limited availability of personnel is present; thereby requiring an extinguisher that has the following features:

(A) High agent flow rate

(B) Increased agent stream range

(C) Increased agent capacity

~~(k)~~ (m) Where wheeled extinguishers are installed, aisles and doorways through which such extinguishers are to be moved shall have a clear and unobstructed width not less than one foot (1 ft.) wider than the overall width of the extinguisher.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160 and 13190, Health and Safety Code.

567.8. Installation Temperatures.

~~Water type (water, AFFF, FFFP) Fire~~ extinguishers shall not be installed in areas where temperatures are outside the range of 40°F to 120°F (4°C to 49°C). ~~Other types shall not be installed in areas where temperatures are outside the range of -40°F to 120°F (-40°C to 49°C). Fire extinguishers shall not be exposed to temperatures outside of the range shown listed on the fire extinguisher label or in the service manual.~~

~~EXCEPTION No.~~

~~(1) Fire extinguishers shall not be exposed to temperatures outside of the listed temperature range shown on the fire extinguisher label. Refer to the manufacturer recommendations.~~

~~(2) Water type (water, AFFF, FFFP) extinguishers shall not be installed in areas where temperatures are outside the range of 40°F to 120°F (4°C to 49°C). Other types shall not be installed in areas where temperatures are outside the range of -40°F to 120°F (-40°C to 49°C). Fire extinguishers shall not be exposed to temperatures outside of the range shown on the fire extinguisher label.~~

~~EXCEPTION No. 1: Where fire extinguishers are installed in locations subject to temperatures outside these ranges, they shall be of a type approved and listed for the~~

~~temperature to which they are exposed, or they shall be placed in an enclosure capable of maintaining the stipulated temperature range.~~

~~EXCEPTION No. 2: Fire extinguishers containing plain water only can be protected to temperatures as low as -40°F (-40°C) by the addition of an antifreeze stipulated on the extinguisher nameplate. Calcium chloride solutions shall not be used in stainless steel fire extinguishers.~~

~~EXCEPTION No. 3: Some fire extinguishers are approved or listed for use at temperatures as low as -65°F (-54°C).~~

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

573. Fire Extinguisher Size and Placement for Commercial Cooking Operations.

(a) Fire extinguishers with a Class K rating shall be provided for hazards where there is a potential for fires involving combustible cooking media (vegetable or animal oils and fats).

(b) Maximum travel distance shall not exceed 30 ft (9.15m) from the hazard to the extinguishers.

(c) Additional fire extinguishers, required for the control of other classes of fires, shall be provided for commercial cooking areas as required by Section 567.

(d) A placard shall be conspicuously placed near the extinguisher that states that the fire protection system shall be activated prior to using the fire extinguisher.

(e) All solid fuel appliances with fire boxes of 5 ft^3 (0.14 m^3) volume or less shall have at least one 1.6 gal (6 L) wet chemical fire extinguisher listed for Class K fires in the immediate vicinity of the appliance.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

574.4. Non-rechargeable Extinguishers.

When an inspection of any non-rechargeable fire extinguisher reveals a deficiency in any of the conditions listed in (3), (4), (5), (6), (7) or (9), of Section 574.2(b), it shall be discharged and removed from service.

EXCEPTION: Non-rechargeable extinguishers containing a ~~halon~~ halogenated agent shall be removed from service, not discharged, and returned to the manufacturer or local fire extinguisher distributor having the capability of recovering the ~~halon~~ halogenated agent.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

575.1 Maintenance and Required Service Intervals.

(a) Fire extinguishers shall be subjected to maintenance annually as described in this chapter or immediately after use or when specifically indicated by an inspection or at the time of hydrostatic test. For purposes of maintenance, hydrostatic tests required during the same calendar year shall be performed at the time of the annual maintenance or recharge. (b) Non-rechargeable fire extinguishers shall not be recharged or hydrostatically tested but shall be discharged and removed from service at a maximum interval of 12 years from the date of manufacture.

EXCEPTION: Non-rechargeable fire extinguishers containing a ~~halon~~ halogenated agent shall be removed from service, not discharged, and returned to the manufacturer or fire extinguisher distributor having the capability of recovering the ~~halon~~ halogenated agent.

(c) When additional fire extinguishers are installed in excess of those required, the additional extinguishers shall be subjected to maintenance and hydrostatically tested in the same manner and at intervals as set forth in this chapter for required extinguishers.

(d) New fire extinguishers that are fully charged by the manufacturer shall, after being sold, be subjected to maintenance within one year from the date of manufacture in accordance with this chapter. If only the year is shown, the new extinguisher shall be due for maintenance by January 1st of the year following the year of manufacture in accordance with this chapter.

EXCEPTION: A licensed fire extinguisher concern may attach the tag described in Section 596.1(a) and punch the new extinguisher block and date the extinguisher was sold. Extinguishers tagged in this manner shall be subjected to maintenance one year from the date on the tag in accordance with this chapter. Extinguishers more than two years old from date of manufacture shall not be tagged as new extinguishers.

(e) At the time of installation and at each annual maintenance, extinguishers shall be placed in a fully charged and operable condition free from defects which may cause malfunctions.

(f) At the time of service, hydrostatic testing, or at any time when parts are replaced, an itemized invoice showing work performed and parts replaced shall be provided by the licensee to the owner or possessor of the fire extinguisher.

(g) The licensee shall offer, in writing, to return all replaced parts to the portable fire extinguisher owner or owner's representative, except such parts as the licensee is required to return to the manufacturer of the portable fire extinguisher under any warranty arrangement. Text of offer must be in capital letters of at least 10 pt. boldface type or legible printing of comparable size.

(h) Service shall not be performed more than 30 days before the date the service is due, unless approved and initialed by the owner or owner's representative in writing. Text must be capital letter in at least 10 pt. boldface type or legible printing of comparable size stating that service was performed more than 30 days prior to the due date.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Sections 13160, 13162, 13177 and 13190.3, Health and Safety Code.

575.3 Maintenance Procedures.

(a) Maintenance procedures shall include a thorough examination of the three basic elements of an extinguisher:

- (1) mechanical parts
- (2) extinguishing agent
- (3) expelling means

EXCEPTION: During annual maintenance, it is not necessary to internally examine ~~non-rechargeable fire extinguishers, carbon dioxide fire extinguishers, stored pressure dry chemical or dry powder fire extinguishers that require a 12 year hydrostatic test, halogenated agent fire extinguishers, wet chemical fire extinguishers or AFFF/FFFP fire extinguishers that use a pre-mixed charge.~~ the following extinguisher types :

(A) Non-rechargeable

(B) Carbon dioxide

(C) Stored pressure dry chemical or dry powder that require a 5 or 12 year hydrostatic test

(D) Halogenated agent

(E) Wet chemical or AFFF/FFFP that use a pre-mixed charge

(F) Pressure water type

(G) Water mist type

However, such extinguishers shall be thoroughly examined externally in accordance with the applicable items of 575.3 (a) (1) and Table 4.

(A) For Stored Pressure Dry Chemical and Dry Powder Fire Extinguishers, see Section 575.4

(B) For Carbon Dioxide Fire Extinguishers, see Section 575.5

(C) For Stored Pressure Halogenated Agent Fire Extinguishers, see Section 575.6

(D) For Stored Pressure Water Type Fire Extinguishers, see Section 575.7

(E) For AFFF and FFP Fire Extinguishers that use a pre-mixed charge, see Section 575.8.

(F) For Stored Pressure Wet Chemical and Water Mist Fire Extinguishers, see Section 575.16.

(G) For Antifreeze and Loaded Stream Fire Extinguishers, see Section 575.13

(b) Fire extinguishers shall be thoroughly examined externally and the appropriate corrective action performed in accordance with the applicable items of Table 4, External Examination Maintenance Checkpoints.

(c) Fire extinguishers shall be weighed on accurate scales, as defined in 557.1(a), and it shall be verified that the total weight is within the allowable tolerances specified by the manufacturer.

Exception: Water-type and wet chemical fire extinguishers that have the liquid amount specified on the extinguisher shell, a fill level mark or an anti-overfill tube.

(d) Scales used for maintenance of fire extinguishers shall be checked for accuracy prior to each use. The accuracy of the scales shall be confirmed with the appropriate test weight as defined in 557.1(a) and 557.1(b)

(e) Straight faced spring scales (i.e. fish scales) shall not be used.

(f) All removable extinguisher boots, foot rings, and attachments shall be removed to accommodate thorough annual cylinder examinations.

(g) Hoses on wheeled-type extinguishers shall be completely uncoiled and examined for damage.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

575.6 Halogenated Agent Extinguishers.

(a) Every 6 years, stored pressure halogenated fire extinguishers that require a 12-year hydrostatic test shall be emptied and subjected to the maintenance procedures as required by Article 6.

(b) The removal of Halon 1211 from fire extinguishers shall only be done using a listed Halon closed recovery system, ~~in compliance with the 1997 3rd Edition of the UL Standard 2006, Standard for Halon 1211 Recovery/Recharge Equipment.~~ The removal of agent from other halogenated agent fire extinguishers shall only be done using a closed recovery system.

(c) The extinguisher cylinder shall be examined internally for contamination and/or corrosion. The halogenated agent retained in the system recovery cylinder shall only be used if no evidence of internal contamination is observed in the extinguisher cylinder. Halogenated agent removed from extinguishers that contain evidence of internal contamination or corrosion shall be processed in accordance with the manufacturer's instruction.

(d) When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the 6-year requirement shall begin from that date of the recharging or testing.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

575.8. AFFF and FFFP Extinguishers.

AFFF and FFFP fire extinguishers shall be ~~maintained in accordance with the following:~~

~~(a) Pre-Mix: these~~ Extinguisher shall be externally examined annually, and broken down and the agent replaced every three years.

~~(b) Solid Type:~~

~~(1) Cartridge shall be removed and the extinguisher serviced in accordance with Section 575.3, and the cartridge re-installed.~~

~~(2) Cartridges shall be replaced with a new one every five years.~~

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

575.13. Antifreeze and Loaded Stream Solution Fire Extinguishers.

Internal maintenance of antifreeze and loaded stream fire extinguishers shall be performed annually. Antifreeze solution for antifreeze extinguishers shall be put through a fine strainer prior to placing it into the extinguisher so as to prevent any

possibility of undissolved salts impairing the normal function of the extinguisher. The antifreeze or loaded stream solution shall not be reused unless permitted by the manufacturer's service and maintenance manual and performed according to their specifications.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

575.16. Wet Chemical and Water Mist Fire Extinguishers

Internal maintenance of wet chemical and water mist fire extinguishers shall be performed every 5 years at the time of hydrostatic test in accordance with the manufacturer's recommendations.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

577.2. Obsolete Fire Extinguishers.

The following types of fire extinguishers are considered obsolete and shall be removed from service:

- (1) Soda acid types
- (2) Chemical foam (excluding AFFF and FFFP)
- (3) Vaporizing liquid (e.g., carbon tetrachloride)
- (4) Cartridge-operated water
- (5) Cartridge-operated loaded stream
- (6) Copper or brass shell fire extinguishers (excluding pump tanks) joined by soft solder or rivets
- (7) Stored pressure water extinguishers with fiberglass shells
- (8) Solid charge-type AFFF extinguishers (paper cartridge)
- (9) Pressurized water fire extinguishers manufactured prior to 1971
- (10) Any extinguisher that needs to be inverted to operate
- (11) Any stored pressure extinguisher manufactured prior to 1955
- (12) Any extinguishers with 4B, 6B, 8B, 12B, and 16B fire ratings
- (13) Stored-pressure water extinguishers with fiberglass shells (pre-1976)
- (14) Dry chemical stored pressure extinguishers, other than wheeled type, manufactured prior to October 1984 shall be removed from service at the next 6-year maintenance interval or the next hydrostatic test interval, whichever comes first.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

578.6. Pressurizing Gas.

Only standard industrial grade nitrogen with a dew point of -60°F (-51°C) to pressurize stored pressure dry chemical, dry powder and ~~halon~~ halogenated agent type fire

extinguishers. Compressed air through moisture traps shall not be used for pressurizing even though so stated in the instructions on older fire extinguishers.
EXCEPTION No. 1: Compressed air may be used from special compressor systems capable of delivering air with a dew point of -60°F (-51.1°C) or lower. The special compressor system shall be equipped with an automatic monitoring and alarm system to ensure that the dew point remains at or below -60°F (-51.1°C) at all times.
EXCEPTION No. 2: Some fire extinguishers are required to be pressurized with argon. They shall be repressurized only with the type of expellant gas referred to on the fire extinguisher label.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

591.6. Examination of Cylinder Condition.

When an extinguisher cylinder or shell has one or more conditions listed in this section, it shall be destroyed by the owner or at the owner's direction:

(a) When there exists repairs by soldering, welding, brazing, or use of patching compounds.

NOTE: For welding or brazing on mild steel shells, consult the manufacturer of the extinguisher.

(b) When the cylinder or shell threads are damaged.

(c) When there exists corrosion that has caused pitting, including under removable nameplate band assemblies.

(d) When the extinguisher has been burned in exposed to excessive heat or flame of a fire.

(e) When a calcium chloride type of extinguishing agent was used in a stainless steel extinguisher.

(f) When the shell is of copper or brass construction joined by soft solder or rivets.

(g) All inverting-type extinguishers.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

592.1. Compressed Gas Cylinders and Cartridges.

Nitrogen cylinders or cartridges used for inert gas storage used as an expellant for wheeled extinguishers shall be hydrostatically tested every five years.

EXCEPTION: Cylinders (except those charged with carbon dioxide) complying with ~~473.34(e) 15-180.209(k)~~, Title 49, Code of Federal Regulations, shall be hydrostatically tested every 10 years.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

592.2. Hose Assemblies.

(a) A hydrostatic test shall be performed on extinguisher hose assemblies which are equipped with a shutoff nozzle at the end of the hose, and high-pressure and low-pressure accessory hoses used on wheeled extinguishers. The test interval shall be the same as specified for the extinguisher on which the hose is installed.

(b) Test pressures for hose assemblies shall be as follows:

(1) Carbon Dioxide - 1,250 psi

(2) Dry Chemical - 300 psi or at service pressure, whichever is higher.

(3) Accessory hose used on wheeled extinguishers shall be tested in accordance with the manufacturer's service manual.

(c) Hose assemblies passing the hydrostatic test shall be thoroughly dried internally. If heat is used, the temperature shall not exceed 150^o F (66^o C).

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

593.1. Test Pressures, High Pressure Cylinders.

~~(a) Carbon dioxide extinguishers shall be tested at 5/3 the service pressure as stamped into the cylinder.~~

~~EXCEPTION: Carbon dioxide extinguishers having cylinder specification ICC3 shall be tested at 3,000 psi (20,685 kPa).~~

~~(b) Nitrogen cylinders and carbon dioxide cylinders used with wheeled extinguishers shall be tested at 5/3 the service pressure as stamped into the cylinder.~~

All high pressure DOT specification cylinders shall be tested at pressures in accordance with the applicable DOT regulations.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

594.3. Test Equipment for Low Pressure Non-D.O.T. Specification Cylinders and Hose Assemblies.

(a) The required equipment for testing low pressure non-D.O.T. specification cylinders and hose assemblies consists of the following:

(1) Cylinders and hose assemblies shall be tested within a protective cage device, or placed behind a protective shield, that will permit visual observation while under pressure for leaks, bulges, and other harmful defects.

(2) A hydrostatic test pump, hand or power operated, shall be capable of producing not less than 150 percent of the test pressure. It is to include appropriate check valves and fittings.

(3) A flexible connection between the test pump and the test cylinder shall be provided with necessary fittings to test through the extinguisher nozzle, test bonnet, or hose outlet, as applicable.

(4) Licensed individuals and licensed companies performing this service shall maintain a license and Certificate of Registration in conformance with Sections 595.5(a) and 595.9(a).

(5) Test pressure gauges shall be capable of indicating 90 percent to 110 percent of the test pressure. The accuracy of this gauge is to be checked by means of a master gauge quarterly and recorded on a log that is to be maintained for 13 years.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

594.4. Testing Procedures.

(a) D.O.T. specification cylinders.

~~(1) In addition to the visual examinations required prior to test as stated in Section 591.6, an internal examination shall be made prior to the hydrostatic test. The procedures for this internal examination shall be in accordance with the requirements of the Standard for Visual Inspection of High Pressure Aluminum Compressed Gas Cylinders (CGA C-6.1), published by the Compressed Gas Association.~~

~~(2) The hydrostatic testing of D.O.T. specification cylinders shall be in accordance with the procedures specified in the pamphlet Methods for Hydrostatic Testing of Compressed Gas Cylinders (Pamphlet C-1), published by the Compressed Gas Association.~~

Cylinders and cartridges bearing D.O.T. markings shall be retested in accordance with the applicable D.O.T. regulations.

(b) Low Pressure Non-D.O.T. Specification Cylinders.

(1) All valves and internal parts shall be removed and the extinguisher emptied. EXCEPTION: On some dry chemical and dry powder extinguishers (cartridge-operated), the manufacturer recommends that certain internal parts not be removed.

(2) All traces of extinguishing materials removed from the inside of dry chemical and dry powder type shells before filling with the test liquid.

(3) The cartridges, and some cartridge receivers of dry chemical and dry powder extinguishers having externally mounted gas cartridges, shall be removed and a suitable plug inserted into the shell opening at the point of removal.

~~(4) All hose shall be removed from cylinders prior to hydrostatic testing. On wheeled extinguishers of the stored pressure water, loaded stream, or cartridge-operated types, the discharge nozzle shall be removed and the complete remaining assembly, including the hose, then tested as described in Section 592.2.~~

(5) On all wheeled dry chemical, dry powder, , Halon 1211 halogenated agent, AFFF/FFFP, and carbon dioxide extinguishers equipped with a shutoff nozzle at the outlet end of the hose, the hose (complete with couplings but without the discharge nozzle) shall be removed and tested separately.

(6) On all wheeled stored pressure dry chemical extinguishers, the head assembly is to be removed and be replaced with a suitable test bonnet.

(7) The hose of the hydrostatic test pump is then attached by the flexible connection to the discharge nozzle, hose assembly, test bonnet, or test fitting, as is applicable. In the

case of wheeled dry chemical and dry powder extinguishers, procedures and fittings should be those recommended by the manufacturer.

(8) The test liquid supply to the test pump is to be turned on and the extinguisher then filled to the top of its collar. Air or other gases shall not be used as the sole medium for pressure testing.

(9) For extinguishers tested with their cap in place, the cap must be tightened SLOWLY while the test liquid supply remains open. When all of the entrapped air within the shell has been bled off and after test liquid emerges, the cap must be tightened fully.

(10) For extinguishers tested with a test bonnet or fitting, the bonnet or fitting must be tightened FULLY while the water supply remains open. When all of the entrapped air within the shell has been bled off and after test liquid emerges, the vent must be closed tightly.

(11) Pressure is then applied at a rate-of-pressure rise so the test pressure is reached in not less than 30 seconds. This test pressure is maintained for at least 30 seconds. Observations are made at this time to note any distortion or leakage of the extinguisher shell.

(12) If no distortion or leakage is noted and if the test pressure has not dropped, the pressure on the extinguisher shall be released. The extinguisher is then considered to have passed the hydrostatic test.

(13) All traces of test liquid and moisture must be removed from all dry chemical, dry powder, and halogenated agent extinguishers by use of a cylinder dryer. If a heated air stream is used, the temperature within the shell must not exceed 150°F (66°C).

(14) Any extinguisher shell that fails this hydrostatic test must be destroyed by the owner or at the owner's discretion.

(c) Testing Procedures -- Hose Assemblies.

(1) The discharge nozzle must be removed from the hose assembly without removal of any hose couplings.

(2) For dry chemical and dry powder types, all traces of dry chemical or dry powder must be removed.

(3) The hose must be completely filled with test liquid before testing.

(4) Pressure is then applied at a rate-of-pressure rise to reach the test pressure within one minute. The test pressure is to be maintained for one full minute. Observations are then made to note any distortion or leakage.

(5) If no distortion or leakage is noted, or the test pressure has not dropped, or the couplings have not moved, the pressure is then to be released. The hose assembly is then considered to have passed the hydrostatic test.

(6) Hose assemblies passing the test shall be dried internally. If heat is used for drying, the temperature shall not exceed 150° F (66°C).

(7) Hose assemblies failing a hydrostatic test must be destroyed by the owner or at the owner's direction.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

594.5. Recording of Tests.

(a) High Pressure D.O.T. Specification Cylinders. For high pressure cylinders passing a hydrostatic test, the month and year shall be stamped in accordance with the requirements set forth by D.O.T. Recording (stamping) shall be placed only on the shoulder, top head, neck, or footring (when so provided) of the cylinder.

(b) Low Pressure D.O.T. Cylinders. Extinguisher shells of low pressure D.O.T. cylinders that pass a hydrostatic test shall have the test information provided in accordance with D.O.T. requirements and recorded on a suitable metallic label or equally durable material. The label shall be affixed by a heatless process to the shell. These labels shall be self-destructive when removal from an extinguisher shell is attempted. The label shall include the following information.

(1) Month and year the test was performed, indicated by a perforation, such as by a hand punch.

(2) Test pressure used.

(3) Name, address and license number (E#) of the concern.

(4) For D.O.T. Specification cylinders, the D.O.T. Retesters Identification Number (RIN), if applicable.

(5) For D.O.T. Specification cylinders, the letter "S" if the Modified Test Method was used.

(c) Low Pressure (non-D.O.T.) Cylinders. Extinguisher shells of low-pressure non-D.O.T. cylinders that pass a hydrostatic test shall have the test information recorded on a suitable metallic label or equally durable material. The label shall be affixed by a heatless process to the shell. These labels shall be self-destructive when removal from an extinguisher shell is attempted. The label shall include the following information.

(1) Month and year the test was performed, indicated by a perforation, such as by a hand punch.

(2) Test pressure used.

(3) Name, address and license number (E#) of the concern.

(4) A written or electronic log shall be maintained of all low-pressure (non-D.O.T.) cylinders which are hydrostatically tested. The log information shall be patterned after the D.O.T. recording requirements and shall include, but will not be limited to; the date, location of extinguisher, type, rating, brand, serial number and the name and EE# of individuals performing the service and the E# of the company they work for. This log shall be made available for a period of 13 years.

(d) Hose assemblies. Hose assemblies passing a hydrostatic test do not require recording.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, Health and Safety Code.

595.5. Fire Extinguisher License Types.

(a) Types of licenses are as follows:

(1) Type A. A class of license to service any or all types of fire extinguishers including (2), (3), (4), (5), and (6), below.

(2) Type B. A class of license to perform maintenance and recharging of water based fire extinguishers, and external maintenance of carbon dioxide fire extinguishers.

(3) Type C. A class of license to conduct hydrostatic tests of low pressure fire extinguisher cylinders and the fire extinguisher concern shall possess the test equipment as specified in section 594.3(a) for non-D.O.T. specification cylinders. A fire extinguisher concern possessing this class of license shall be a D.O.T. approved cylinder requalification facility if D.O.T. specification cylinders are tested and the fire extinguisher concern shall possess the test equipment as specified in section 594.2.

(4) Type D. A class of license to perform maintenance and recharging of dry chemical, dry powder and external maintenance of halogenated agent fire extinguishers.

(5) Type E. A class of license to conduct hydrostatic tests of high pressure fire extinguisher cylinders, and perform internal maintenance and recharging of carbon dioxide fire extinguishers. A fire extinguisher concern possessing this class of license shall be a DOT approved cylinder requalification facility.

(6) Type F. A class of license to perform internal maintenance, recharge and recover halogenated agents from portable fire extinguishers. A fire extinguisher concern possessing this license shall have a listed Halon 1211 closed recovery system.

(7) Type L. (Limited). A class of license, limited to public or private entities that are not engaged in the business of servicing fire extinguishers and which only maintain their own portable fire extinguishers. A Type L licensee may only perform external annual maintenance on all fire extinguishers. ~~of stored pressure dry powder and dry chemical fire extinguishers, water type and wet chemical type fire extinguishers and external annual maintenance of halogenated agent and carbon dioxide fire extinguishers.~~

(b) Every class of license shall be identified by type as specified above according to the act or acts performed by the licensee or by any of the owner's employees. Every licensed concern shall be staffed by qualified personnel and shall be properly equipped to perform the act or acts for the type of license issued.

(c) Any licensed concern may take orders for the performance of any acts for which the concern is not classified provided these orders are consigned to another licensed concern that is classified (based on 595.5(d)) to perform such acts.

(d) Every licensed concern who is not authorized to perform specific acts shall have on file with the State Fire Marshal reciprocal letters of agreement to perform those specific acts from licensed concerns who are authorized. All required reciprocal letters of agreement shall be submitted to the State Fire Marshal with each original, renewal and status change application for a license. Any changes to reciprocal letters of agreement shall be reported to the State Fire Marshal within 15 days of the change.

(e) A licensee is only authorized to perform those specific acts for which a license has been granted by the State Fire Marshal. Qualifications for a licensee shall consist of having the necessary tools, equipment, service manuals, recharging agents and materials, lubricants, replacement parts and qualified experienced personnel for each specific act. Each licensed concern shall submit evidence of qualifications to the State

Fire Marshal with each original, renewal and status change application for license.

(f) A prospective licensee must provide written proof of their service experience in order to be licensed. The prospective licensee shall provide written documentation that they have at least 24 months of experience ~~in the servicing, maintenance, recharging, repairing, hydrostatic testing and installation of portable fire extinguishers.~~ with portable fire extinguisher in all the following areas:

- (1) Servicing.
- (2) Maintenance.
- (3) Recharging.
- (4) Repairing.
- (5) Hydrostatic testing and
- (6) Installation.

This shall be accomplished by having their fire extinguisher service employer submit letter (s) on their letter head attesting to this experience. This correspondence shall indicate their length of employment, an estimate of the number and type of portable fire extinguishers that they have experience with and a statement that the individual has the necessary experience to obtain a license. Additional documentation may include training certificates from the various fire extinguisher manufacturers and college classes related to Fire Science.

Exception: An applicant for a Limited License does not need to meet the 24 month of experience but shall submit their work experience and lesson plan / work instructions for performing an annual external maintenance in lieu of the 24 month requirement.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13163, Health and Safety Code.

596. General.

(a) Annual Maintenance Tags, Verification of Service Collars, and Hydrostatic Test Labels required in accordance with this chapter shall be approved by the State Fire Marshal and shall conform with the provisions of this Article. One facsimile or printers proof showing both sides of each tag, collar, or label shall be submitted to the State Fire Marshal for approval with each original and renewal application for license, when the licensed concern changes address or license type(s), and whenever tags, collars, or labels are redesigned or revised. Tags, collars, or labels shall not contain false and misleading statements as determined by the State Fire Marshal. Tags, collars, or labels approved by the State Fire Marshal shall not be used for any purpose other than to reflect servicing or selling of an approved portable fire extinguisher. At no time will anything be attached to the front of the approved tag, collar, or label when installed on the portable fire extinguisher.

(b) Annual Maintenance Tag.

(1) Each fire extinguisher that has undergone annual maintenance as required in this Chapter shall have an Annual Maintenance Tag attached in accordance with this Article.

(c) Verification of Service Collar.

(1) Each extinguisher that has undergone maintenance, which includes internal examination or has been recharged as required in this chapter shall have a Verification of Service Collar attached in accordance with this Article.

EXCEPTION: Cartridge/cylinder-operated and carbon dioxide type fire extinguishers do not require a Verification of Service Collar.

(d) Hydrostatic Test Label.

(1) All low pressure fire extinguishers successfully passing a hydrostatic test shall have a hydrostatic test label affixed in accordance with this Article.

Note: Authority cited: Section 13160, Health and Safety Code. Reference: Section 13160, 13183, 13190.1, 13190.2 and 13190.3, Health and Safety Code.